Abstract

Methods and systems consistent with the present invention allow identification of a true signal contained in a signal containing the true signal and noise. In general, digital signal information representing a signal of interest plus noise is utilized by the present invention. The first N samples of digital signal information are stored with the Nth sample being stored in manner which renders it accessible for additional operations. A specially selected set of weights are applied to the buffered N samples and, additionally, phase rotation is applied to the Nth sample. The phase rotated Nth sample and weighted samples are combined using a first equation, described in more detail below. The resulting signal, which exhibits an increased Signal-to-Noise ratio (SNR) and may be more effectively utilized in subsequent MTI processing by virtue of the operations performed on the previous N samples as described herein, is then available for further processing using conventional techniques.

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